



# Key determinants of women's entrepreneurial intentions in encouraging social empowerment

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## Abstract

This paper analyzes the influence of the socio-cultural environment, social perceptions, and entrepreneurial orientation on women's entrepreneurial intentions. Structural equation modeling technique is used as an analytical technique involving 400 women entrepreneurs in microsmall and medium-sized enterprises (MSMEs) in Indonesia. The results showed that the socio-cultural environment and social perceptions have a positive and significant effect on entrepreneurial orientation. In addition, the socio-cultural environment and entrepreneurial orientation also have a positive and significant effect on women's entrepreneurial intentions. Entrepreneurial orientation is proven to play a role as a mediator in the relationship between the socio-cultural environment and women's entrepreneurial intentions. However, social perceptions are proven to have no significant effect on women's entrepreneurial intentions, either directly or mediated by entrepreneurial orientation. This study offers a new framework for understanding women's entrepreneurial intention in developing countries by contributing to theoretical and policy implications.

**Keywords** Entrepreneurial orientation · Socio-culture environment · Social empowerment · Social perception · Women's entrepreneurial intention

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## 1 Introduction

Women's entrepreneurship has received significant attention in promoting the social and economic empowerment of a country. The potential of women in improving the wheels of the economy is very large, including entrepreneurial opportunities as a career choice for women to contribute to the economy and improve welfare for themselves, their families and society. Indonesia has great potential in encouraging the creation of female entrepreneurship. Based on data from the Indonesian Ministry of Cooperatives and SMEs (2018), the number of MSMEs in Indonesia has reached 62.9 million business units. Data from the Ministry of Manpower show a positive trend, where the number of Indonesian women entrepreneurs continues to increase each year, reaching 14.3 million in 2018. The contribution of MSMEs managed by women to gross domestic product (GDP) reaches 9.17%, while its contribution to exports is more than 5% (Sindonews.com 2019). The numbers show an increase every year. However, based on MIWE data (2018a), the Indonesian women entrepreneurs index ranks 30th in the world. The women entrepreneur index consists of several calculation parameters including the number of business realizations achieved by women, knowledge of assets and financial access, and the business environment (MIWE 2018b). This shows that the participation of women in entrepreneurial activities in Indonesia is still low.

Intention is an early predictor of behavior (Anggadwita and Dhewanto 2016). Entrepreneurial intention is influenced by the cognitive and psychological characteristics of an entrepreneur, such as being innovative, proactive, and risk taker (Marques et al. 2013; Mas-Tur and Soriano 2014). Martins and Perez (2020) revealed that entrepreneurial orientation attitudes possessed by a business actor can help in translating the right skills in order to take advantage of perceptions from the surrounding environment in increasing entrepreneurial intentions. According to Drucker (1985), entrepreneurial orientation is considered as an inherent character of someone who has a strong will to bring innovative ideas into the real world of business and can develop them resiliently.

Entrepreneurial women are faced with specific problems, such as stereotypes or social perceptions about the roles of men and women, which can influence their intentions to become entrepreneurs (Gupta et al. 2009). According to Anggadwita and Dhewanto (2016), social perception has a significant role in encouraging women to become entrepreneurs. The interaction between individuals and their social environment, such as family, friends or relatives, plays an important role in developing entrepreneurial intentions (Gieure et al. 2019). Support from the social environment will have an impact on the entrepreneurial spirit of women to succeed. In addition, the diversity of the socio-cultural environment also affects the characteristics of local communities, which have an impact on community behavior, including the behavior of women entrepreneurs (Hofstede 1980). Social and cultural challenges are two critical obstacles experienced by women, which cause a reduction in the number of women participating in business activities (Mungai and Ogot 2012).

Women have greater challenges than men in carrying out entrepreneurial activities because they have many roles, especially for those who are married and have

children (Anggadwita and Dhewanto 2016), so further research is needed on the factors that influence women's intention to become entrepreneurs. This study aims to analyze the influence of the socio-cultural environment, social perceptions, and entrepreneurial orientation on the entrepreneurial intention of women in Indonesia. This research is expected to add new insights into women's entrepreneurial intentions by considering the socio-cultural environment, social perceptions, and entrepreneurial orientation. Thus, entrepreneurial activity is an alternative that can increase and encourage women's empowerment socially and economically.

This article consists of the following six sections: the first section is an introduction that provides a background to this study. The second focuses on literature and theoretical reviews by developing hypotheses based on the proposed conceptual model. The third section describes the research method of this study, which includes sample and data collection, measurement, and data analysis. The empirical findings and discussion of the study results are in the next section. Finally, section six contains conclusions and recommendations.

## 2 Literature review

### 2.1 Women's entrepreneurship

A trend in women's entrepreneurship research emerged in the late 1970s where previously the mainstream of research focused on male entrepreneurs (Jennings and Brush 2013). The results of the study by Bruni et al. (2004) revealed that men and women entrepreneurs are generally the same, and there is no special need for separate investigations. Thus, the study of women's entrepreneurship did not develop significantly until the early 2000s when two conferences were held: the policy-oriented Organization for Economic Cooperation and Development conference on women entrepreneurs in small and medium enterprises was held in 1998, and the Diana International academic conference was held in 2003 (Jennings and Brush 2013). To date, research on women's entrepreneurship has received significant attention from academics, practitioners and the government for its contribution to encouraging women's empowerment and economic potential. Tambunan (2009) also revealed that the development of women's entrepreneurship in developing Asian countries has tremendous potential in women's empowerment and community transformation in the region. Based on research by Sajuyigbe and Fadeyibi (2017), the involvement of women in entrepreneurship is a catalyst for sustainable economic development.

Several studies have defined female entrepreneurship, including that by Kumar (2013) who defined a woman entrepreneur as a person or group of women who performs a challenging role by running a business to meet their daily needs and financial independence. Meanwhile, according to Barani and Dheepa (2013), women's entrepreneurship is the ownership of a business and the creation of a business that empowers women and increases their socioeconomic strength. Anggadwita and Dhewanto (2016) revealed that entrepreneurial women refers to women who participate in entrepreneurial activities by taking risks and identifying opportunities in their environment to combine resources in unique ways. Meanwhile, Jana et al.

(2019) revealed that women entrepreneurs are women who define a business unit and try and lead it to achieve economic success. Anggadwita and Dhewanto (2016) added that women entrepreneurs have a dual role, especially for those who are married, as housewives and entrepreneurs.

Based on research by Ramadani et al. (2013), women entrepreneurs are an important source of economic growth, contribute to creating new jobs, are able to take advantage of business opportunities, and provide different solutions to management, organizational, and business problems. Women's productive activities are aimed at empowering them economically and enabling them to contribute more to economic growth (Anggadwita and Dhewanto 2016). Women in entrepreneurial activities are mostly involved in home-based businesses for the production of micro-, small-, and medium-sized enterprises (MSMEs), or the formal and informal sectors (International Labour Organization (ILO) 1998). Women's entrepreneurial activities are not only for economic needs but also have positive social impacts for women themselves and their social environment (UNIDO 2001; Tur-Porcar et al. 2017).

Women face various challenges in starting a business including childcare responsibilities, family commitments, and lack of information in several areas, such as business development, skilled workforce, effective networking, and business training opportunities, which are also indicated as important obstacles to their business growth (Roomi et al. 2009). According to Tambunan (2012), there are four factors that hinder women from becoming entrepreneurs in Indonesia, including low levels of education and lack of access to training, especially those living in rural or remote areas; large household burden; many areas where women are hampered from opening their own businesses by constraints in customs, local culture, religion, and law; and difficulties in accessing credit to formal financial institutions. Sajuyigbe and Fadeyibi (2017) add that women entrepreneurs in Nigeria face major challenges including lack of access to finance, work/home conflicts, and lack of moral support from family members. Rani and Natarajan (2020) also add that other factors, such as social, religious, and cultural conditions in the surrounding environment have a role in the crisis situation of entrepreneurs.

## 2.2 Entrepreneurial intention

Intention is a measurable entrepreneurial way of thinking (Singh and Onahrng 2019). Intention is the stage of the next step in human behavior, in which entrepreneurship is assumed to be the stage for predicting a person's choice to set up his own business (Bagozzi 1992), including women's entrepreneurship (Rey-Martí et al. 2015; Anggadwita and Dhewanto 2016). Meanwhile, Chhabra et al. (2020) define entrepreneurial intentions as a state of mind that directs a person toward the formation of new business concepts and making decisions for a career in entrepreneurship.

Liñán et al. (2011) argue that only self-efficacy and personal attitude of entrepreneurial intention have the most influence on entrepreneurial intention, while Israr and Saleem (2018) develop it and examine that gender, family background, entrepreneurship education, personality, courage, and experience seeking have a positive correlation with entrepreneurial intentions. And specifically for women, Ferri et al.

(2018) find that, in addition to behavior, attitudes and social pressures influence interest in entrepreneurship.

Although the number of men who have entrepreneurial preferences is higher than women (Ferri et al. 2018), they form business intentions in the same way (Santos et al. 2016), and the number of women who are entrepreneurs continues to increase (Kamberidou 2020). Rubio-Bañón and Esteban-Lloret (2016) stated that the lack of interest in entrepreneurship among women has received various responses from world organizations. Furthermore, Kamberidou (2020) states that women's entrepreneurship is a strategy for developing countries to increase their economic growth.

Levels of economic and social development shape the environment that influences entrepreneurial intentions (Iakovleva et al. 2011). Some of the efforts made to increase women's entrepreneurship include advancing knowledge of their socio-culture, enhancing entrepreneurship education programs and promoting them (Noguera et al. 2013). Ekpe and Mat (2012) find that entrepreneurial intentions and entrepreneurial orientation could be moderated by the environment.

### 2.3 Socio-culture environment

Kadam et al. (2019) said that cross-cultural competences also support increased performance for organizations. Apart from education, Hayton et al. (2002) highlight that previous experiences, religion, and socio-cultural characteristics influence the level of entrepreneurship. Socio-cultural theory is a framework of cultural patterns consisting of situations, structures, and schemes related to urban lifestyles (Dillon et al., 2008). Socio-culture is a combination of social factors with cultural factors that are limited by cross-cultural communication and other patterns of behavior (McCarty, 2009). Previously, North (2010) defined socio-cultural factors as a code of ethics, stamp, values, norms of behavior, and so on which were called community culture. Noguera et al. (2013) use the socio-economy as a control variable consisting of variables of age, education level, employment status, and household size.

According to Hofstede (2011), culture is a collective program of thoughts that distinguishes members of one group or category of people from another. Thus, the socio-cultural environment can reflect the conditions of a society, especially women entrepreneurs, as the focus of this study. According to Hofstede (2011), the cultural dimension consists of power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation. This study adopts Hofstede's (2011) three dimensions in measuring the socio-cultural environment of women entrepreneurs consisting of individualism, masculinity, and uncertainty avoidance. Masculinity versus its opposite, femininity refers to the distribution of roles between gender, assertiveness, and competitiveness leading to "masculine" and simplicity and value of caring for "feminine". Meanwhile, uncertainty avoidance is related to people's tolerance for uncertainty and ambiguity; it shows the extent to which the culture programs its members to feel uncomfortable or comfortable in unstructured situations. Abdullahi and Zainol (2016) state that a socio-culture environment consisting of education, religion, and family background has a positive effect on entrepreneurial orientation. Thus, the hypothesis of this study:

### **H1** Socio-culture environment has a positive effect on entrepreneurial orientation.

According to Linan and Chen (2009), culture and social are influenced by external variables on the antecedents of intention (subjective norms, personal attitudes, and perceived behavioral control) and the relative strength of the relationship between these cognitive constructs. Linan and Chen (2009) developed an instrument for entrepreneurial intention to measure relevant cognitive constructs including the role of cultural dimensions in entrepreneurial cognition. Environmental perceptions of the value of an entrepreneur have an impact on entrepreneurial development (Edelman and Yli-Renko 2010). One of the challenges of women's entrepreneurship in developing countries is a multicultural issue (Anggadwita et al. 2017). Socio-cultural factors that most influence a woman to become an entrepreneur are fear of failure, her perceived abilities (Noguera et al. 2013), perceived opportunities, and role models (Arenius and Minniti 2005). The impact of socio-culture on women entrepreneurial intentions is also observed by Mehtap et al. (2017), where an education system is not sufficient and requires a supportive environment, a conservative tradition can certainly hinder. This is in contrast to the findings which state that entrepreneurship education is ineffective, and it is individual and socio-cultural factors that influence entrepreneurial intentions (Singh et al. 2017). The proposed hypothesis of this study is

### **H2** Socio-culture environment has a positive effect on women's entrepreneurial intentions.

The various dimensions of cultural values impact entrepreneurial intention through risk taking and proactive behavior (Kreuses et al. 2010). Daring to take risks is a courageous attitude to face challenges by exploiting internal and external resources by changes in the environment. In small businesses, the socio-cultural role influences the organization to act and make decisions independently. The combination of knowledge begins with the exchange of knowledge, which impacts entrepreneurial orientation (Weerakoon et al. 2020). The challenges of the external environment and organizational culture will influence the organization to develop and adapt to change. Mar Fuentes et al. (2015) stated that the progress of women's businesses is affected by entrepreneurial orientation and external knowledge acquisition. The study also looks at external factors that can contribute to creating a sustainable women's business. Matlay et al. (2014) say that culture and participation significantly increase entrepreneurial intention. Therefore, the socio-cultural environment will tie an entrepreneurial orientation to compete in the market and survive against competitors. Thus, the entrepreneurial orientation influenced by the socio-culture climate will significantly affect women's entrepreneurial intentions. The following literature supports the hypothesis of

### **H3** The positive relationship between socio-culture environment and women's entrepreneurial intentions is mediated by entrepreneurial orientation

## 2.4 Social perception

In social relations, social perception can be used as a frame of mind to facilitate and regulate one's relationships with other people, while in business, social perception is a person's efforts to understand other people's problems (Anggadwita and Dhewanto 2016). Social perception is a process within a person that shows others' organization and interpretation as an object. Therefore, this social perception is more about the human perception based on past experiences and learning relating to similar people, things, or events. According to Mathur and Nihalani (2012), social perception is related to entrepreneurship. Social perception in the context of entrepreneurship is an entrepreneur's process in capturing the meaning of social objects and social (human) and environmental problems. The social perception built by the social investment of positive values helps society grow with better quality and growth options (Mathur and Nihalani 2012). According to Resmi and Kamalanabhan (2010), individual personality, social competence, and entrepreneurial orientation contribute to entrepreneurial success. In other words, entrepreneurial orientation can emerge by looking at patterns of human behavior based on perceptions of the (social) reality learned. With social perceptions, every entrepreneur tries to determine what consumers think, believe, feel, want, and desire. "Social function requires the ability to recognize the emotional state of oneself and others" (Permatasari et al. 2020). It allows to read the needs and wants of consumers based on expressions and behavior. There is a positive relationship between entrepreneurial orientation and small business performance through social networking (Fatima and Bilal 2019). Social perception influences the formation of women to become entrepreneurs and includes self-concept, values, attitudes, past experiences, and expectations. Past experiences, hopes, and a desire to help others often provide a framework within a person for entrepreneurship. Miles et al. (2013) stated that social value orientation tends to serve people by taking an entrepreneurial approach. Therefore, social perception also refers to how people understand and categorize an effort to meet their consumers' needs. Based on the literature, we construct the hypothesis of

**H4** Social perception has a positive effect on entrepreneurial orientation.

Social perception is one of the factors that influence women's entrepreneurial intentions. Human perception is selective; there are internal factors that affect attention to entrepreneurship. In social entrepreneurship, entrepreneurs deliberately develop interventions by focusing on beliefs and cognitions (Urban 2020). Social perception is a psychological, cognitive process in entrepreneurship that reflects attitudes, beliefs, values, and expectations used to interpret social reality. Personal values influence social enterprises' creation through the importance of personal experience, the desire to make changes, and the willingness to do something meaningful in one's life (Anggadwita et al. 2020). The process presents some ideas on how social values and motivations are integrated into the predominant entrepreneurial intention model (Fayolle et al. 2014). Reality cannot be

perceived without going through a unique process and a very personal reason to act in a social relationship. Thus, social perceptions are personal and subjective and are influenced by expectations.

Social perceptions can directly influence women's entrepreneurial intentions. Naturally, a woman will focus on objects that are considered necessary. When entrepreneurs see an opportunity, stimulation significantly affects the cognitive structure, expectations and is also directly influenced by perception. Women are more likely to translate positive desirability into social entrepreneurial intentions (Dickel and Eckardt 2021). Women are entrepreneurs because of the independence factor; women desire to work independently by opening their businesses without depending on other people. However, Anggadwita and Dhewanto (2016) stated social perception does not directly influence the intention, but also significantly influences personal attitude. The entrepreneurial intention is collaboratively and interactively influenced by entrepreneurial orientation, social capital, and psychological capital (Mahfud et al. 2020). In other words, social perception can be defined as an entrepreneur's ability to recognize and understand other people's problems and translate them into a business opportunity. Neneh (2020) also stated that social support had a positive and significant influence on entrepreneurial intention. Therefore, the following literature supports the hypothesis of

**H5** Social perception has a positive effect on women's entrepreneurial intentions.

Social perception refers to an individual or group's independent view in bringing up their social idea or vision. According to Lumpkin and Dess (2001), entrepreneurial orientation represents entrepreneurial activities that refer to entrepreneurial processes, practices, decision-making styles, and behaviors. In the context of social enterprises, social perceptions are the main foundation to spur entrepreneurial orientation and will influence employers to see social problems and motivation to help and provide solutions to existing social issues.

Social perceptions play an important role in improving entrepreneurial orientation and women's entrepreneurial intentions (Nasip et al. 2017). Entrepreneurial orientation in women is manifested in two ways: the effectiveness of entrepreneurs in managing their business and, second, related to business planning to attitudes or responses in the market. Social support affects the entrepreneurial orientation and satisfaction of women entrepreneurs (Jyoti et al. 2011). Entrepreneurial orientation and social capital have a relationship to business performance and studies have shown that risk taking and social capital are positively related to the business performance of women entrepreneurs. As social capital plays a vital role for women entrepreneurs, and risk taking contributes to business performance, an entrepreneurial orientation influenced by social perceptions, therefore, allows companies to develop ideas and make them happen to solve existing social problems. Social perceptions will form an entrepreneurial orientation to predict social needs and find solutions to these problems. Those proposed explanations form the hypothesis:



**H6** The positive relationship between social perception and women's entrepreneurial intentions is mediated by entrepreneurial orientation.

## 2.5 Entrepreneurial orientation

Entrepreneurial orientation is a character that emerges from a person to innovate, be proactive, and take risks in running a business (Miller 1983). According to Kreiser et al. (2010), entrepreneurial orientation refers to processes, practices, and decision making that lead to new directions. Entrepreneurial orientation is an essential factor to increase women's intention to become entrepreneurs. Entrepreneurial orientation refers to the nature, character, and traits inherent in an entrepreneur to realize innovative ideas and develop them resiliently. It is very important for a company to provide an entrepreneurial orientation because it affects its functional performance (Lee and Lim 2009; Rezaei and Ortt 2018). However, Nasip et al. (2017) stated that being proactive and innovative in women's entrepreneurship is not significantly related to their business performance. Koe (2016) also argues risk-taking ability is not an influential factor in entrepreneurial intention. Therefore, entrepreneurial orientation refers to a process aimed at seeking out new opportunities related or unrelated to the current line of operations, introducing new products and brands ahead of the competition, and strategically removing downhill operations from the lifecycle (Nasip et al. 2017). In addition to the role of entrepreneurial orientation, there are many factors that influence entrepreneurial intention. Attitudes, intentions, and entrepreneurship education are factors that can increase entrepreneurial orientation (Potishuk and Kratzer 2017).

Bolton and Lane (2012) classify the concept of entrepreneurial orientation as a psychological construct that helps in explaining the basic means for understanding the reasons behind individual behavior to engage in entrepreneurial activities. Koe (2016) found intentions toward entrepreneurship were quite positive in becoming entrepreneurs. Jyoti et al. (2011) stated that women entrepreneurs are one of the fastest-growing entrepreneur populations. Lee and Tsang (2001) argue that entrepreneurial orientation in women is based on four dimensions: need for achievement, internal locus of control, self-reliance, and extroversion. Individual entrepreneurial orientation dimensions include innovativeness, risk taking, and proactiveness (Bolton and Lane 2012; Twum et al. 2021). Innovation is defined as applying creativity to solve problems and opportunities to improve and produce new products, both for current and new markets. Meanwhile, proactivity reflects entrepreneurs' willingness to dominate competitors to introduce new products or services on top of competition and activities to anticipate future demands to create change and shape the environment. The primary function of entrepreneurial orientation is how an entrepreneur can take risks optimally in an environment full of uncertainty. Meanwhile, taking risks is the willingness of a company to invest resources in a business where the results may be uncertain or unknown (Wiklund and Shepherd 2003). Thus, entrepreneurial orientation is an individual's attitude toward entrepreneurial activities, either within an existing company or outside the organization. Entrepreneurial orientation

influences women's entrepreneurial intentions to create new ventures. Therefore, we construct the hypothesis:

**H7** Entrepreneurial orientation has a positive effect on women's entrepreneurial intentions.

### 3 Research methodology

#### 3.1 Sample and data collection

The population in this study was women entrepreneurs who owned MSMEs in Indonesia. The definition of MSMEs in this study refers to that based on the Law of the Republic of Indonesia No. 20 of 2008, which is a trading business managed by an individual and/or individual business entity which refers to a productive economic business with the criteria stipulated in the law. Criteria for MSMEs according to Indonesia law are micro-enterprises having assets of less than 50 million IDR and sales revenue per year less than 300 million IDR; small enterprises having assets 50 to 500 million IDR and sales revenue per year 300 million to 2.5 billion IDR; and medium enterprises having assets 500 million to 10 billion IDR and sales revenue per year 2.5–50 billion IDR. The sampling technique uses probability sampling with a random sampling method. This research was conducted between June and December 2020 using a cross-sectional questionnaire survey design. The number of samples was calculated based on the Slovin formula with a significance of 95% (Ryan 2013). A total of 400 respondents participated in filling out the questionnaire for this study.

Questionnaires were distributed offline and online to all respondents. However, the majority of the responses were obtained through online questionnaires. A total of 423 questionnaires were collected in this study, but only 400 were used because other questionnaires were deemed incomplete, including incomplete answers to the questionnaire filled out by respondents.

The majority of respondents in this study were in the age range less than 25 years (49%), followed by the age range of 25–35 years (30%), and 36–45 years (14%). Meanwhile, respondents who were more than 45 years old amounted to 7%. Based on educational background, the majority of respondents have received a Bachelor's degree (52%), a minority of respondents have a junior high school education (1%) and a Master/Doctor (6%). This shows that the respondents in this study have an adequate educational background. Several respondents had work experience before deciding to become women entrepreneurs with various job statuses including permanent employees (27%) and temporary employees (20%). This study also found that 28% were respondents who had just graduated from formal education, and 25% did not have a previous job (unemployed). Based on marital status, the majority of respondents are married (57%) and single (42%), only 1% of respondents are divorced. Respondents who were married had 1–2 children (67%) and 3–5 children (28%), and the rest had no children (4%) and more than five children (1%). The

majority of the husband's employment status of the respondents is private employees and entrepreneurs/self-employees, and 20% are government employees.

Based on the business profile, it was found that the respondents' businesses were less than three years old (41%), 3–6 years old (39%), 6–10 years old (15%), and more than 10 years old (5%). The business sectors run by respondents are culinary (34%), fashion (21%), trade (13), and 32% are other businesses. The majority of respondents' annual turnover is less than 300 million (70%), and only 2% of respondents have a turnover of more than 50 billion.

### 3.2 Measurements

The survey questionnaire was designed to study the impact of the socio-cultural environment, social perceptions, and entrepreneurial orientation on women's entrepreneurial intention. The construct measurement uses a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The purpose of using a four-point Likert scale in this study is to prevent bias, so that respondents cannot choose a neutral option. The questionnaire from the original language was translated into Indonesian by two professional translators (Guillemin et al. 1993; Beaton et al. 2007). The questionnaire uses Indonesian to make it easier for respondents to understand the contents of the questionnaire. A total of 39 items was allocated to identify four variables (socio-cultural environment, social perceptions, entrepreneurial orientation, and women's entrepreneurial intention). The questionnaire instrument was validated using pilot data from 30 respondents. The results of the instrument validity test showed that all questionnaire items were valid with a loading factor value  $> 0.5$ , while the reliability of each variable had a high level of reliability with a Cronbach's alpha value  $> 0.70$  (Hair et al. 2006).

Measurement of women's entrepreneurial intention and social perceptions is based on studies from Liñán and Chen (2009) and Anggadwita and Dhewanto (2016). A total of nine questionnaire items was used to identify women's entrepreneurial intention, and three questionnaire items to identify social perceptions. The socio-cultural environment is taken from the concept of Hofstede (2011) which consists of uncertainty avoidance (3 items), individualism (4 items), and masculinity (5 items). Meanwhile, the measurement of entrepreneurial orientation uses the results study of the Bolton and Lane (2011) which consists of innovativeness (7 items), proactiveness (3 items), and risk taking (5 items).

### 3.3 Data analysis

The structural equation modeling (SEM) analysis techniques is used to test the proposed hypotheses. Data processing uses PLS-SEM. The statistical analysis of this study includes the measurement model and the structural model of the proposed conceptual model. This study tested the validity and reliability of the measurement model using composite reliability (CR) and Cronbach's alpha criteria to measure model reliability, while Average Variance Extracted (AVE) and discriminant reliability were used to measure the model's validity. The standard value used to measure

the reliability of the model is a CR value  $> 0.7$  (Bagozzi et al. 1991; Chin 1998; Hair et al. 2006) and Cronbach's alpha  $> 0.6$  (Henseler et al. 2009). Meanwhile, the validity of the measurement model uses a standard AVE value of more than 0.5 (Fornell and Larcker 1981; Henseler et al. 2009). The Fornell-Larcker criterion is used to evaluate discriminant validity where the square of the AVE value of each construct must be higher than the correlation value between constructs in a model (Hair et al. 2012). Another criterion for assessing discriminant validity is the cross-loading matrix by comparing the correlation of the indicator with other latent variables compared to the measured variable; this indicates that model fit needs to be reconsidered because it shows the low validity of the indicators (Henseler et al. 2009).

Structural model analysis includes the coefficient of determination ( $R^2$ ), predictive relevance (Stone Geisser  $Q^2$ ), and effect size ( $f^2$ ). The coefficient of determination consists of three classifications (Chin 1998): 0.67 (substantial), 0.33 (moderate), and 0.19 (weak). The prediction of the relevance of  $Q^2$  serves to validate the model with a score of  $Q^2 > 0$  which indicates that it has good predictive relevance and exogenous variables are able to predict endogenous variables (Akter et al. 2011). Meanwhile, the recommended effect sizes of  $f^2$  values range from  $f^2 \geq 0.35$  for strong effects,  $0.14 \leq f^2 < 0.35$  are moderate effects,  $0.02 \leq f^2 < 0.15$  for weak effects, while values  $f^2 < 0.02$  a for an insubstantial effect size (Henseler 2017).

## 4 Result

### 4.1 Measurement model

The results of this study indicate that outer loading for all indicators has a value of  $> 0.5$ , this is in accordance with the standard values suggested by Anderson and Gerbing (1988), Bagozzi and Phillips (1991), and Gefen and Straub (2005). Instrument reliability testing also shows internal consistency with Cronbach's alpha values for all constructs  $> 0.6$  (Henseler et al. 2009). Internal consistency reliability was also achieved using CR; the test results showed that all constructs had a CR value  $> 0.7$  (Bagozzi et al. 1991; Chin 1998; Hair et al. 2006). Based on the two assessment parameters, it shows that the measurement model has good reliability because it can provide consistent results and represent the study population accurately.

In addition, the test results also show that convergent validity can be achieved with the AVE value of all constructs in this study  $> 0.5$  (Fornell and Larcker 1981; Henseler et al. 2009). This shows that the latent variables proposed in this study are proven to have convergent validity. Table 1 shows the scores for outer loading, Cronbach's alpha, CR and AVE.

In addition, discriminant validity is also measured based on the Fornell-Larcker criterion, which indicates that the score for each construct must be greater than the highest square correlation score with other constructs of the research model (Hair et al. 2013). The loading score for each indicator shows the higher score of each cross loading for its own construction in the same column and row. Table 2 shows the results of the Fornell-Larcker criteria in this study.

**Table 1** Convergent validity, composite reliability, and outer loading

No.	Latent variables	Indicators	Outer loading	Cronbach's alpha	CR	AVE
1	Women's entrepreneurial intention	Make every effort to start and run own firm	0.794	0.919	0.933	0.612
		Professional goal is to become entrepreneur	0.799			
		Determined to create a firm in the future	0.826			
		Ready to do anything to be entrepreneur	0.839			
		Very serious thought of starting a firm	0.857			
		Make big money	0.778			
		Firm intention to start a firm	0.772			
		Balance between work and personal life	0.776			
		Economic needs	0.559			

Table 1 (continued)

No.	Latent variables	Indicators	Outer loading	Cronbach's alpha	CR	AVE
2	Entrepreneurial orientation	Innovativeness	0.944	0.950	0.702	
		Entertain new ideas with enthusiasm	0.735			
		To do things that others may not think of	0.760			
		Make decision that others call "innovative"	0.785			
		Prefer a unique and one-of-a-kind approach	0.766			
		Support experiments and original approaches	0.807			
		Try new and unusual activities	0.779			
		Try my own unique way	0.778			
		Proactiveness				
		Act in anticipation of future problems, needs or changes	0.755			
		Plan ahead on projects	0.798			
		Prefer to "step-up" and get things going on projects rather than sit and wait for someone else to do it	0.767			
		Risk taking				
		To do something challenging	0.762			
		Take bold action by venturing into the unknown	0.800			
		Invest a lot of time and/or money on something that might yield a high return	0.784			
		Act "boldly" in situations where risk is involved	0.543			
		Challenged by situations that require creativity	0.582			

Table 1 (continued)

No.	Latent variables	Indicators	Outer loading	Cronbach's alpha	CR	AVE
3	Socio-culture environment	Uncertainty avoidance		0.936	0.945	0.591
		Strong appeal to a competitive market	0.808			
		Constrained by the government's business rules	0.762			
		Formal management concept	0.760			
		Individualism				
		Trust in collective decisions	0.793			
		High tolerance for the social environment	0.695			
		Greater social mobility	0.815			
		Mutual cooperation is a culture of kinship in society	0.718			
		Masculinity				
		Good working relationships and conditions	0.832			
		Potential of local culture for entrepreneurial activities	0.799			
4	Social perception	Equality, solidarity and quality of work life	0.797			
		Assertive, aggressive, competitive	0.735			
		Higher job stress	0.691			
		Close family	0.872	0.843	0.905	0.759
		Friends	0.857			
		Society	0.885			

**Table 2** Fornell-Larcker criterion

		(1)	(2)	(3)	(4)
(1)	Entrepreneurial orientation	0.838			
(2)	Socio-cultural environment	0.751	0.768		
(3)	Social perception	0.538	0.548	0.871	
(4)	Women's entrepreneurial intention	0.778	0.755	0.536	0.782

Thus, the results of this study indicate that the measurement model proposed in this study has met the criteria of both internal consistency reliability, convergent, and discriminant validity.

This study also examines the outer model value for formative indicators using the variance inflation factor (VIF) to determine the relationship between indicators. This study used the threshold value proposed by Kleinbaum et al. (2013), which indicates that the VIF should not exceed five. The results of this study indicate that the VIF criteria have been met, so there is no collinearity problem.

In addition, heterotrait-monotrait (HTMT) correlation ratio analysis was used to detect a lack of discriminant validity in general research situations (Wiratmadja et al. 2020). According to Henseler et al. (2015), there are two ways to use HTMT to assess discriminant validity: criteria and statistical tests. First, as a criterion, threshold values have been determined to assess discriminant validity. There are several suggestions regarding the HTMT threshold value, namely 0.85 (Clark and Watson 1995; Kline 2011) and 0.90 (Gold et al. 2001; Teo et al. 2008). Meanwhile, Henseler et al. (2015) used threshold values of 0.85 and 0.90. Second, as a statistical test, the bootstrap procedure makes it possible to construct a confidence interval for HTMT. This study used a second method where the HTMT value as a statistical test with a value of 1 falls outside the interval's range (Henseler et al. 2015). Table 3 shows that HTMT in this study fulfills the requirements of discriminant validity, which indicates that the two constructs are different empirically.

**Table 3** Heterotrait-monotrait (HTMT) confidence interval

	Original sample ( <i>O</i> )	Sample mean ( <i>M</i> )	2.5%	97.5%
SCE → EO	0.888	0.887	0.833	0.933
SP → EO	0.579	0.586	0.481	0.690
SP → SCE	0.609	0.613	0.501	0.720
WEI → EO	0.830	0.828	0.757	0.888
WEI → SCE	0.833	0.833	0.769	0.888
WEI → SP	0.603	0.606	0.485	0.717



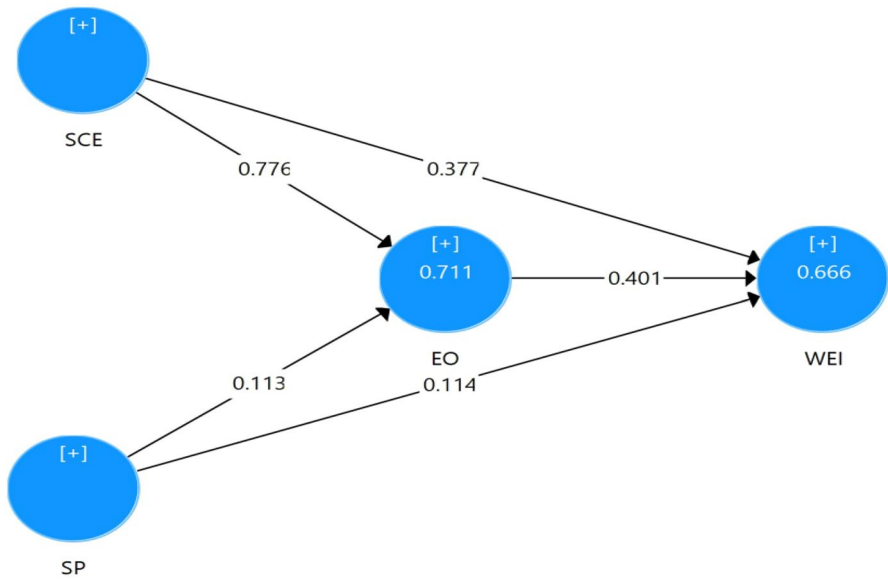


Fig. 1 Structural model

## 4.2 Structural model

Figure 1 shows the structural model in this study. Based on the test results, five of the seven hypotheses are directly supported empirically. The socio-cultural environment was found to have a positive and significant relationship with entrepreneurial orientation ( $\beta=0.776$ ,  $t=15.314$ ,  $p<0.001$ ) and women's entrepreneurial intention ( $\beta=0.377$ ,  $t=4.163$ ,  $p<0.001$ ). Entrepreneurial orientation has been shown to play a positive and significant role as a mediator of the relationship between the socio-cultural environment and women's entrepreneurial intention ( $\beta=0.311$ ,  $t=4.109$ ,  $p<0.001$ ). Social perception is proven to have a positive and significant relationship with entrepreneurial orientation ( $\beta=0.113$ ,  $t=1.998$ ,  $p<0.05$ ). Meanwhile, social perception was found to have no significant relationship with women's entrepreneurial intention ( $\beta=0.114$ ,  $t=1.905$ ,  $p>0.05$ ). In addition, entrepreneurial orientation is also shown to have no significant role as a mediator of the relationship between social perception and women's entrepreneurial intention ( $\beta=0.045$ ,  $t=1.942$ ,  $p>0.05$ ). In contrast, entrepreneurial orientation has a positive and significant relationship with women's entrepreneurial intention ( $\beta=0.401$ ,  $t=4.468$ ,  $p<0.001$ ).

The structural model above explains 71.1% of the variance for entrepreneurial orientation ( $R^2=0.711$ ) and 66.6% variance for women's entrepreneurial intention ( $R^2=0.666$ ). This coefficient of determination represents a substantial and moderate prediction (Chin 1998). Furthermore, the Pearson correlation test was also carried out to test the relationship between latent variables. The results showed that most of the latent variables (entrepreneurial orientation,  $p<0.001$ ; socio-cultural environment,  $p<0.001$ ) had a significant relationship with women's entrepreneurial

**Table 4** Stone–Geisser ( $Q^2$ ) score

	SSO	SSE	$Q^2 = (1 - SSE/SSO)$
Entrepreneurial orientation	3585.000	2183.761	0.391
Socio-cultural environment	2868.000	2868.000	
Social perception	717.000	717.000	
Women's entrepreneurial intention	2151.000	1289.373	0.401

**Table 5** Hypotheses testing and efek size

Hypotheses	<i>t</i> value	<i>p</i> value	$f^2$	Interpretation	Conclusion
H1 SCE → EO	15.314	0.000	1.458	Strong effect	Supported
H2 SCE → WEI	4.163	0.000	0.121	Weak effect	Supported
H3 SCE → EO → WEI	4.109	0.000	0.311	Moderate effect	Supported
H4 SP → EO	1.998	0.046	0.031	Weak effect	Supported
H5 SP → WEI	1.905	0.057	0.026	Weak effect	Rejected
H6 SP → EO → WEI	1.942	0.052	0.045	Weak effect	Rejected
H7 EO → WEI	4.468	0.000	0.139	Weak effect	Supported

intention, except for social perception. The highest correlation is the relationship between entrepreneurial orientation and women's entrepreneurial intention (0.838). The relationship between social perceptions and women's entrepreneurial intention is the lowest (0.536); however, social perceptions are shown to have a significant relationship with entrepreneurial orientation ( $p < 0.05$ ).

The predictive relevance of  $Q^2$  is used to measure how well the observed value is reproduced by the model and its parameter estimates, verifying the validity of model predictions through sample reuse (Chin 1998). The results of the study found that entrepreneurial orientation ( $Q^2 = 0.391$ ) and women's entrepreneurial intention ( $Q^2 = 0.401$ ) had good predictive relevance (Aker et al. 2011). Table 4 below shows the Stone-Geisser score which shows the  $Q^2$  value for the endogenous variables of entrepreneurial orientation and women's entrepreneurial intention.

A bootstrap approach was used based on resampling of 5,000 subsamples. The nonparametric resampling procedure does not impose assumptions on the normality of the sampling distribution (Preacher and Hayes 2008; Hair et al. 2016). The test results show that H1, H2, H3, H4, and H7 are supported, while H5 and H6 are rejected. This study assesses the strength or weakness of the hypothesis proposed. The practical relevance of the significant effects should be investigated by considering the effect sizes of the relationships between constructs. The study results show that the relationship between the socio-cultural environment and entrepreneurial orientation has a strong effect ( $f^2 = 1.458$ ). There is a moderate effect on the relationship between the socio-cultural environment and women's entrepreneurial intention mediated by entrepreneurial orientation ( $f^2 = 0.311$ ). Meanwhile, there is a weak effect on the relationship between socio-cultural environment and

women's entrepreneurial intention ( $f^2=0.121$ ), social perception and entrepreneurial orientation ( $f^2=0.031$ ), social perception and women's entrepreneurial intention ( $f^2=0.026$ ), social perception and women's entrepreneurial intention which is mediated by entrepreneurial orientation ( $f^2=0.045$ ), and entrepreneurial orientation and women's entrepreneurial intention ( $f^2=0.139$ ). So it can be concluded that the effect size of the proposed structural model has weak, moderate, and high effect sizes. Table 5 below shows a summary of hypothesis testing and effect sizes.

## 5 Discussion

Based on the results of the study, it shows that the majority of women entrepreneurs in this study is of productive age and has been married with 1–2 children. This is relevant to the age of business of women entrepreneurs, the majority of which are less than three years old with a turnover of less than 300 million. This shows the importance of building the mental and interest of women entrepreneurs from an early age to be able to support the economy (Ahmad and Saputro 2017). This study also shows that the majority of husbands' occupations of women entrepreneurs are private employees and entrepreneurs/self-employees. This assumes that women's entrepreneurial intentions include helping husbands to meet the economic needs of the family, financial independence so they are not dependent on husbands and self-actualization for activities and creativity in daily life (Munawaroh 2012). Although the majority of women entrepreneurs have a background in work experience, this shows that women have a priority on balancing household management and flexibility in working as entrepreneurs, compared to routine work in companies (Anggadwita and Dhewanto 2016). The culinary and fashion sectors are the leading sectors most attractive to women entrepreneurs because they are considered part of women's routines as housewives and feminine stereotypes with attractive appearances. This is supported by data from the Indonesian Central Statistics Agency in 2018 which show that women are the main players in the creative industry with the culinary and fashion sectors as the two leading sectors (Databoks 2018).

This study aims to examine the effect of entrepreneurial orientation on women's entrepreneurial intentions. This study also examines the socio-cultural environmental factors and social perceptions of entrepreneurial orientation and their influence either directly or indirectly through entrepreneurial orientation as a mediator. The study findings indicate that the conceptual model proposed in this study is relevant for explaining women's entrepreneurial intentions. Based on the measurement results of the model, it shows that the research model has good validity and reliability. Meanwhile, based on the measurement of the structural model, it shows that five of the seven proposed hypotheses can be supported.

The socio-cultural environment has a positive and significant effect on entrepreneurial orientation and has a strong effect (Hypothesis 1). The results of this study indicate that the dimensions of the socio-cultural environment in women entrepreneurs allow them to distribute gender roles, have assertiveness and competitiveness, and tolerate uncertainty, which has a strong effect on entrepreneurial orientation in women (Hofstede 2011). The results of this study are supported by previous studies

which state that the socio-culture environment has a positive effect on entrepreneurial orientation (Abdullahi and Zainol 2016). Hypothesis 2 in this study is also supported which states that the socio-cultural environment has a positive and significant effect on women's entrepreneurial intentions. The results of this study are supported by several previous studies which reveal that the socio-cultural environment is influenced by entrepreneurial intentions (Linan and Chen 2009; Edelman and Yli-Renko 2010; Singh et al. 2017). However, the study results suggest that this relationship has a weak effect size. Socio-cultural issues are still a challenge for women entrepreneurs in developing entrepreneurial intentions (Anggadwita and Dhewanto 2016), so that a supportive tradition and environment is needed (Mehtap et al. 2017). According to Bhasin and Ng (2019), social taboos are the biggest challenge for women in Laos to increase their involvement in entrepreneurial activities. Based on the results of a study by Bhasin and Ng (2019), socio-cultural values based on religion and tradition are firmly embedded in the psyche of society, so that entrepreneurship development is a major challenge for the Lao government.

Hypothesis 3 is supported, which states that entrepreneurial orientation acts as a mediator of the relationship between the socio-cultural environment and women's entrepreneurial intentions, and provides a moderate effect size. The results of this study indicate that entrepreneurial orientation consisting of innovativeness, proactivity, and risk taking has a significant effect as a mediator between the socio-cultural environment and women's entrepreneurial intentions. This shows that the socio-cultural environment has a significant role in fostering entrepreneurial orientation and ultimately increasing women's entrepreneurial intention. This finding is in line with previous studies (Kreuses et al. 2010; Matlay et al. 2014).

Hypothesis 4 in this study is supported which states that social perceptions have a positive and significant effect on entrepreneurial orientation. This shows that social perceptions influence the formation of women entrepreneurs, which include self-concept, values, attitudes, past experiences, and expectations in themselves so that they are able to recognize the emotional state of themselves and others (Permatasari et al. 2020). The results of this study are in accordance with the study by Fatima and Bilal (2019) showing a positive relationship between entrepreneurial orientation and small business performance. The assumptions of this study indicate that social perceptions encourage the entrepreneurial orientation of women as an effort to seize business opportunities.

Meanwhile, hypothesis 5 and hypothesis 6 are proven to be rejected, which indicates that social perceptions do not have a significant effect on women's entrepreneurial intentions, either directly or through entrepreneurial orientation as a mediator. The results of this study are in accordance with several previous studies which state that social perceptions fail to achieve statistical significance in predicting women's entrepreneurial intentions (Armitage and Conner 2001; Anggadwita and Dhewanto 2016) and have a weak contribution to entrepreneurial intentions (Autio et al. 2001). According to Heuer and Liñán (2013), entrepreneurial intentions are to act for oneself not to meet other people's expectations, even though their entrepreneurial motivation is influenced by the environment. So the influence of social perceptions on women's entrepreneurial intentions shows a weak relationship.

Hypothesis 7 states that entrepreneurial orientation has a positive and significant effect on women's entrepreneurial intentions. In contrast to the research results of Lee and Lim (2009) which stated that innovation and risk taking, the dimensions of entrepreneurial orientation, are identified as factors that do not have a significant effect on organizational performance. This study indicates that entrepreneurial orientation, which consists of innovation, risk taking, and proactivity (Bolton and Lane 2012; Twum et al. 2021), is proven to have an effect on women's entrepreneurial intentions. Thus, entrepreneurial orientation is an important factor in increasing women's intention to become entrepreneurs. An entrepreneurial orientation serves to ensure that women entrepreneurs can take optimal risks in an environment of uncertainty by investing resources in businesses whose results may be uncertain or unknown (Wiklund and Shepherd 2003).

## 6 Conclusions and recommendations

This study focuses on identifying entrepreneurial intention in women entrepreneurs who own SMEs in Indonesia. Indonesia as a developing country has a diversity of socio-cultural environments so that it affects the characteristics and behavior of women entrepreneurs. This study found that the socio-cultural environment and social perceptions have a positive and significant effect on entrepreneurial orientation. The socio-cultural environment and entrepreneurial orientation were also found to have a positive and significant effect on women's entrepreneurial intention. In addition, entrepreneurial orientation also plays a significant role as a mediator in the relationship between the socio-cultural environment and women's entrepreneurial intention but does not show a significant relationship between social perceptions and women's entrepreneurial intention. Likewise with social perceptions, which do not show a positive and significant relationship with women's entrepreneurial intention. Thus, this study assumes that the entrepreneurial intentions of women are driven more from their own goals and abilities and not to fulfill perceptions of the social environment.

This study contributes to the academic literature related to the intention of women entrepreneurs by providing empirical evidence in developing countries. This study recommends that the socio-cultural environment and social perceptions are factors that are considered in generating entrepreneurial orientation for women in increasing women's entrepreneurial intentions, so that these factors cannot be ignored. The policy implication of this research is the emphasis on entrepreneurial orientation in women's empowerment policies in Indonesia. This recommendation is for two reasons. First, the findings reveal that entrepreneurial orientation not only has a direct influence on women's entrepreneurial intentions but also interacts strongly with other constructs, such as the socio-cultural environment and social perceptions, in explaining women's entrepreneurial intentions. Second, the model presented in this study shows that the socio-cultural environment has the highest effect size on entrepreneurial orientation, which illustrates its relevance for policy formulation. The findings of this study provide input to the government as an effort to empower

women by emphasizing entrepreneurial orientation to increase women's entrepreneurial intentions.

We note some limitations of our study that could be addressed in further research, including the uneven distribution of respondents in each region, considering that Indonesia has different cultural diversity in each region. Thus, a stratified sampling approach in determining the number of respondents in each region is recommended in future studies. In addition, this study does not go into more detail about the profile of women entrepreneurs, thus, paving the way for further research to investigate and explore based on the demographic, personal, and business sector backgrounds of women entrepreneurs. Our study analyzes women entrepreneurs in Indonesia; however, to generalize our findings, the research must be replicated in other cultural contexts in other developing countries.

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